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## NOTICE OF ALLOWANCE AND FEE(S) DUE

65913 7590 05/21/2008

NXP, B.V.  
NXP INTELLECTUAL PROPERTY DEPARTMENT  
M/S41-SJ  
1109 MCKAY DRIVE  
SAN JOSE, CA 95131

EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 05/21/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/616,635

07/26/2000

Kevin R. Boyle

B 034367US

9407

TITLE OF INVENTION: BODY-WORN PERSONAL COMMUNICATIONS APPARATUS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$0	\$1440	08/21/2008

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE-FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,635	07/26/2000	Kevin R. Boyle	B 034367US	9407
TITLE OF INVENTION: BODY-WORN PERSONAL COMMUNICATIONS APPARATUS				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$0	\$1440	08/21/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAMPURIA, SHARAD K	2617	455-575000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/147; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

1

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 728 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 728 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

09/616,635

**Examiner**

Sharad Rampuria

**Applicant(s)**

BOYLE, KEVIN R.

**Art Unit**

2617

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERIT IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/17/2008.
2. ☒ The allowed claim(s) is/are 1-3, 6-12 and 15-18 (renumbered as 1-14 respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of the:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/17/2008 has been entered.

The "Orthogonal Watch Helix" (labeled for the submission as Exhibit A)" filed on 03/17/2008 under 37 CFR 1.131 is sufficient to overcome the Nishikido et al. reference.

### ***Examiner's Amendment***

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Robert Crawford (Reg. No. 32,122) on 05/05/08.

The application has been amended as follows:

Claims 5, 14, are cancelled.

Claims 1, 10, are amended as follows:

1. A body-worn personal communications apparatus comprising:

A physically-short electric antenna that is physically smaller in at least one dimension than its electrical length in that same dimension;

A transceiver connected to said physically-short electric antenna;

A microphone connected to said transceiver; and

A casing having a width, a length and a height, said height being less than said width and less than said length,

Wherein said transceiver is disposed within said casing,

Wherein said physically-short electric antenna is mounted such that said one dimension of said physically short electric antenna is aligned with said height of said casing,

Wherein said physically short electric antenna is designed so as to not require manipulation by a user.

Wherein said a microphone is located at an end of said physically-short electric antenna, the end of said physically-short electric antenna being the end of antenna that is furthest from said casing.

10. A body-worn personal communications apparatus comprising:

A casing having a width, a length and a height, said height being less than said width and less than said length;

A physically-short electric antenna that is physically smaller in at least one dimension than its electrical length in that same dimension; and

A microphone connected to said transceiver; and

Wherein said physically-short electric antenna is mounted such that said one dimension of said physically short electric antenna is aligned with said height of said casing,

Wherein said physically short electric antenna is designed so as to not require manipulation by a user.

Wherein said a microphone is located at an end of said physically-short electric antenna, the end of said physically-short electric antenna being the end of antenna that is furthest from said casing.

***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

Claims 4-5, 13-14, are cancelled.

Claims 1-3, 6-12 and 15-18 (renumbered as 1-14 respectively) are patentable.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The closest prior art, Fernandez Martinez. (US 6078803) teaches The invention discloses a wrist-device which comprises a first module (1) such as a personal computer and a second module (2) consisting of a mobile telephone or a wireless telephone terminal which are coupled by means of elements (15) in a bracelet configuration for holding the device to the forearm of the user, and wherein windows (12) are provided in said modules for the passage of electronic connection buses (13) between said modules (1 and 2). (Abstract)

The next prior art, Tolvanen. (US 6215985A) teaches A mobile communicator consisting of a wrist strap and an actual combined mobile communicator connected to the strap which

includes at least two separate mobile communicator parts. The parts of the mobile communicator are mechanically connected by joints so that they can be folded inwardly against one another in repose position and can be opened profitably sequentially and in parallel when in a usage position. The mobile communicator parts are arranged to be opened outwardly for use in essentially a vertical direction compared with the plane of the wrist strap. (Abstract)

The closest prior art, Suguro; Akihiro (US 6041220) teaches An antenna device having a surface on which radiation of an output of the antenna device is suppressed in at least one direction is attached to a case so that the radiation-output-suppressed surface of the antenna device is arranged to face an user side at the time of talking. (Abstract)

The next prior art, Hama. (US 5450091) teaches An arm-attached band type radio apparatus capable of providing a stable antenna gain without being affected by the band size has an arm attaching band that is formed into a loop by way of a buckle 31 having an metallic electrode plate 32, first and second conductor plates 5L, 5R, shaped so as to form a slot antenna, to form a loop-like slot antenna. The distal end side of conductor plate 5L has an overlap capacitance changing portion 15 so that, when the connecting position of the band changes according to the thickness of the wearer's arm, the overlap capacitance between first conductor plate 5L and metallic electrode 32, is changed. The magnitude of the capacitance change corresponds to a change in the inductance of the antenna to compensate for a shift in the resonance frequency. The overlap capacitance can be changed by controlling the overlap area or the effective dielectric constant of the material separating conductor plate 5L from metallic electrode 32. (Abstract)



The closest prior art, Farrar et al. (US 5737699A) teaches Timepiece adapted to be worn on the wrist, comprising a case (24,91,82) for housing, in addition to elements necessary for displaying the time of day, an antenna (60) comprising at least one coil winding and being capable of capturing an electromagnetic field bearing radio diffused messages, a microreceiver (71) capable of receiving and transforming messages captured by said antenna (60) into data perceptible to the wearer of the timepiece, and a non-conductive support structure (70) onto which the microreceiver (71) is at least partially mounted, the support structure (70) bearing conductive paths (63,64,65,66) to enable the connection of said antenna (60) to the microreceiver (70). The coil winding is composed of a plurality of segments (61,62) each being directly connected to the conductive paths (63,64,65,66) such that the antenna (60) is directly mounted to and supported by the support structure (70). (Abstract)

The next prior art, Olsen. (US 4847818A) teaches An improved wristwatch, radiotelephone comprising a case having a timekeeping circuit a radio transceiver and a display disposed therein, a strap having a pair of strap ends connected to opposite ends of the case and adapted to be connected together for holding the case on a wearer's wrist, a microphone connected to the transceiver, a speaker connected to the transceiver, and an antenna connected to the transceiver and embedded in the strap, wherein the improvement comprises a microphone housing and a speaker housing disposed on the strap and spaced apart a sufficient distance to permit simultaneous use thereof by a user when said strap ends are not connected. Either or both of the speaker housing and microphone housing are disposed on and supported by the terminating end of a strap end and incorporate portions of the clasp. The antenna is provided by

coupling through a filter circuit to a pair of audio leads connecting the transceiver to either or both of the speaker and microphone. (Abstract)

The closest prior art, Imanishi et al. (US 5541610 A1) teaches An antenna equipment employing a chip inductor based antenna includes a multilayered miniaturized chip inductance element having an approximately  $\lambda/4$  wavelength which achieves a half-wave dipole antenna performance together with a ground having an approximately  $\lambda/4$  wavelength. In a preferred embodiment, the inductance element is formed of a plurality of thin sheets of insulating material carrying conductor segments which are connected through via-holes in the sheets to form a spiral inductance element within the stack of sheets. Direct connection avoids impedance matching circuit insertion loss and low-cost miniaturization with reduced antenna gain deterioration from surrounding conductors is provided for an effective miniature portable radio communication apparatus. (Abstract)

The next prior art, Skrivervik; Anja (US 5699319A) teaches Horological piece intended to be worn on the wrist including either a dipole antenna (4) or a slot antenna (30; 40) and a first case (5) comprising organs (7, 8, 10) for displaying the time, and a micro receiver (6). The horological piece further comprises a second case (2) intended to receive the first case (5) such that the exterior surface of the first case and the interior surface of the second case defined a mounting slot (25). The antenna (4; 30; 40) comprises a dielectric substrate (13; 33; 43), and at least one printed circuit conductive element (11, 12; 31; 41) fixed to the substrate (13; 33; 43). (Abstract)

The closest prior art, Koch (US 5798984 A1) teaches Timepiece including a case, a bezel and a transponder including a radio broadcast signal transmitting and/or receiving circuit and an antenna connected to that circuit, the antenna and the transmitting and/or receiving circuit

being both fixed to the bezel wherein they are, for example arranged in an appropriate recess.

(Abstract)

The next prior art, Teodoridis et al. (US 4884252 A) teaches A timepiece (4), adapted to be worn on a part of the body, for example on the wrist, is provided with an antenna capable of capturing an electromagnetic field bearing radio-diffused messages. Measurements have shown that when close to the wrist the radial electric component ( $E_{sub.r}$ ) and the azimuthal or tangential magnetic component ( $H_{sub.\phi}$ ) were predominant. Consequently, in order to capture the first, a capacitive antenna the electrodes of which are parallel to the back cover (2) of the timepiece will be provided and, to capture the second, an inductive antenna including a winding the axis of which is parallel to the longitudinal direction of the bracelet (3) will be provided. (Abstract)

However, all the above combination fails to anticipate or render the claimed limitations in combination with all the recited limitations of the disclosed independent claims obvious (**viewed the entire claim as a whole**), over any of the prior art of record, alone or in combination.

Consequently, the disclosed independent claims are allowed on behalf of above-discussed reasons, and also preserved via Applicants arguments and remarks filed on 03/17/2008 as well. Since the disclosed dependent claims are dependant on one of the above independent claims, therefore they are also patentable.

***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000 or

[EBC@uspto.gov](mailto:EBC@uspto.gov).

/Sharad Rampuria/  
Primary Examiner  
Art Unit 2617